

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method for manufacturing electron emitters by providing pairs of element electrodes, and conductive layers connecting the element electrodes to each other on a substrate, the method comprising:

a step of forming banks surrounding electrode-forming regions for forming the element electrodes and conductive-layer forming regions for forming the conductive layers;

a step of lyophilizing the electrode-forming regions and the conductive-layer forming region using an O₂ plasma process, the step of lyophilizing the electrode-forming regions and the conductive-layer forming regions removing a residue of the banks formed in the electrode-forming regions and the conductive-layer forming region during the step of forming the banks;

lyophobic the banks using a CF₄ plasma process, the step of lyophobic the banks introducing fluorine groups into the banks;

a step of discharging first droplets toward the electrode-forming regions;

a step of discharging second droplets toward the conductive-layer forming regions; and

a step of removing the banks;

wherein the banks consist of protrusion portions which function as partitions and have a tapered shape such that a width of the banks decreases as a height of the banks increase.

2. – 4. (Cancelled)

5. (Original) An electron emitter manufactured by the method according to Claim 1.

6. – 8. (Cancelled)

9. (Currently Amended) A method for manufacturing an electron emitter comprising:

defining a pair of spaced apart electrode-forming regions on a substrate;

defining a conductive layer-forming region on the substrate, the conductive layer-forming region interconnecting the electrode-forming regions;

forming a bank encircling the electrode-forming regions and the conductive layer-forming region;

lyophilizing the electrode-forming regions and the conductive-layer forming region using an O₂ plasma process, the step of lyophilizing the electrode-forming regions and the conductive-layer forming regions removing a residue of the bank formed in the electrode-forming regions and the conductive-layer forming region during the step of forming the bank;

rendering the bank lyophobic using a CF₄ plasma process, the step of rendering the bank lyophobic introducing fluorine groups into the bank;

discharging first droplets toward the electrode-forming regions to form a pair of element electrodes;

discharging second droplets toward the conductive layer-forming regions to form a conductive layer connecting the element electrodes to each other; and

removing the bank after the conductive layer and element electrodes are formed, wherein the bank consists of protrusion portions which function as partitions and have a tapered shape such that a width of the banks decreases as a height of the banks increase.

10. (Previously Presented) The method of claim 9, further comprising treating a portion of the conductive layer to form an electron-emitting section.

11. – 18. (Cancelled)